

TO: Stephanie Vaughn **CC:** Rob Law (*dmi*)
Roger McCready (CH2M Hill)
FROM: Stan Kaczmarek Bill Potter (*dmi*)
DATE: June 3, 2013
RE: May 31, 2013 Revised Surface Water Quality Monitoring Plan Outline

The CPG's contractor, Great Lakes Dredge and Dock (GLDD) has deployed turbidity monitors for a shake-down period at the end of last week in advance of the 30 day pre-dredge monitoring period. Data from the first weekend of this pre-monitoring period are attached for your review. The turbidity data collected over the weekend vary based on tides and demonstrate that ambient turbidity in the downstream stations are higher (Buoys 1 and 2) than in the upstream stations (Buoys 3 & 4). Please note that GLDD has numbered the buoys differently than referenced by EPA in their comments. GLDD's Buoy #1 is furthest downstream (RM 10.2) and Buoy #4 is furthest upstream. All references in this memo utilize this downstream to upstream numbering sequence.

CPG recommends that it first implement the Pre-Dredge Monitoring Program (PDMP), modified to address EPA comments with clarifications as specified below. Once additional data are collected; there will be a better understanding of how ambient turbidity varies in the river and between the buoys during a variety of conditions. The CPG recommends that EPA, NJDEP and CPG work together to devise a control strategy for monitoring water quality during dredging operations based on the PDMP monitoring results.

Regarding the PDMP, CPG understands that the purpose of the additional data collection is to add to the available data set from the earlier physical and chemical water column monitoring programs and gain a better understanding of the relationship between turbidity, TSS and COPCs. It will also be used to determine the best depth for turbidity monitoring (shallow monitor at 1 foot depth vs. a mid-depth monitor at approximately the 3 ft setting of existing buoys). In order to meet these objectives, CPG recommends modifying the transect sampling strategy suggested by EPA:

- Ebb tide: Buoys #4, #3, and #2 (Day 1)
- Flood Tide: Buoys #3, #2, and #1 (Day 2)
- Slack Tide: Buoys #4, #3, #2, and #1 (Day 3)

Specifically, CPG proposes to sample at one buoy location per day. This will allow CPG to complete the 10 requested buoy/tide combinations with only 1 vessel over a 4 day period. The alternative will require CPG to utilize 3-4 vessels over a 3 day period.

CPG also proposes to implement the PDMP utilizing only 1 L samples for TCDD analysis instead of the 2 L samples recommended by EPA. This will allow the CPG and its contractors to develop and propose modifications to the existing QAPP to allow the use of 2 L samples during the Dredge Monitoring Program (DMP) should the use of 1 L samples during the PDMP produce some qualified (EMPC-J) data. Otherwise, the CPG may not be able to begin COPC data collection in 2 weeks, and that delay could affect the early July start date for dredging.

Finally, CPG requests answers to the following questions:

S. Vaughn

June 3, 2013

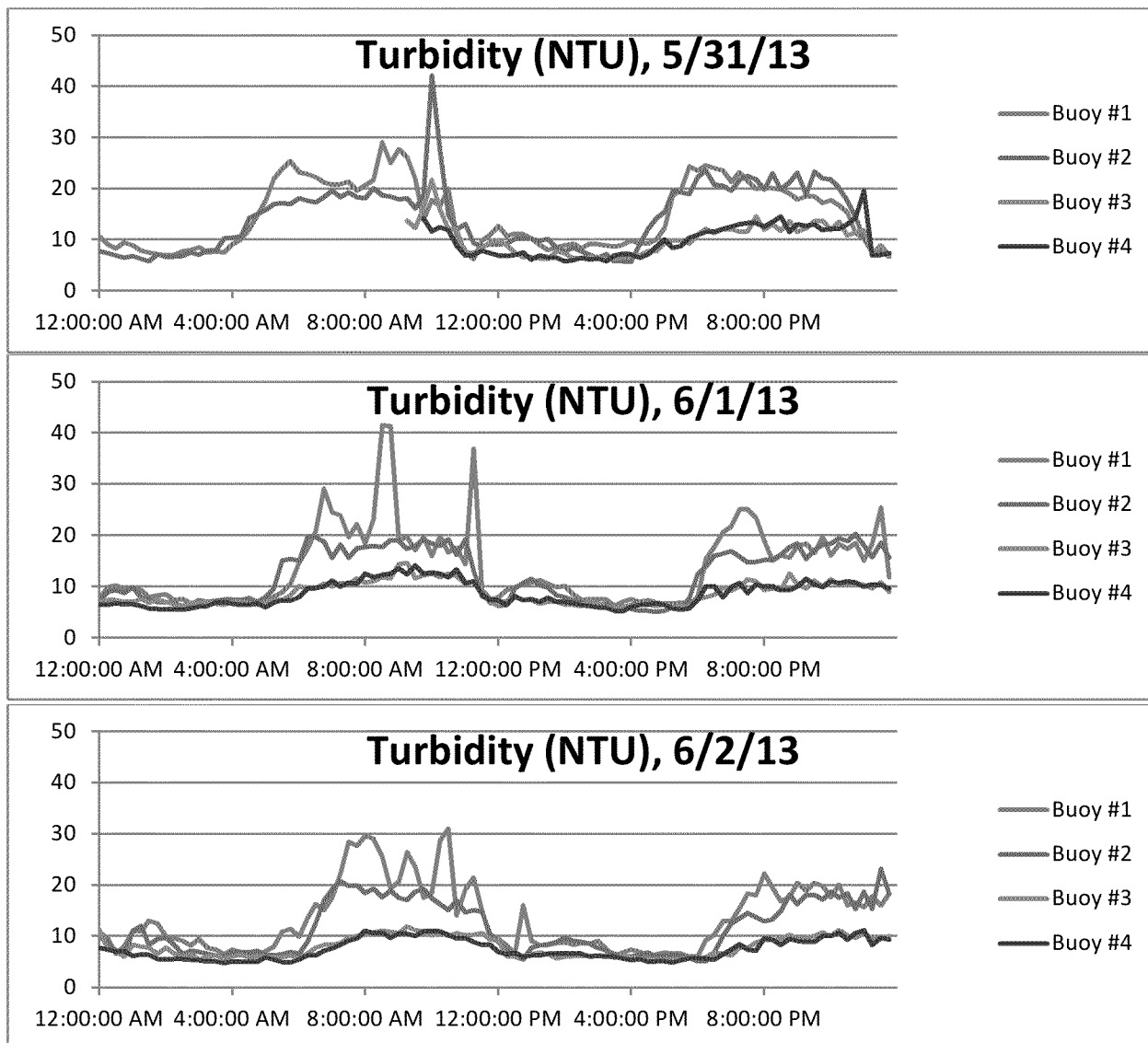
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- In contracting for support vessels, CPG is assuming that EPA/CDM will not be on board to collect split samples. Is that assumption correct?
- Does EPA want CPG to analyze for dissolved mercury with field filtering of the sample?
- Does CPG need to change tubing for each depth and location for the 10 days of TSS/turbidity sampling?
- Does CPG need to change tubing for each depth and location for the transect COPC sampling?

Once, agreement is reached on the above points and answers to these questions, CPG will modify the WQMP and begin implementation.

RM 10.9 Removal Area Turbidity Monitors, Initial Shakedown Period Results



Day		High /Low	Tide Time	Height Feet
F	5/31	High	2:11 AM	6.7
	5/31	Low	9:38 AM	0.0
	5/31	High	2:54 PM	6.5
	5/31	Low	10:11 PM	0.8
Sa	6/1	High	3:08 AM	6.3
	6/1	Low	10:37 AM	0.1
	6/1	High	3:50 PM	6.5
	6/1	Low	11:14 PM	0.8
Su	6/2	High	4:06 AM	5.9
	6/2	Low	11:32 AM	0.3
	6/2	High	4:46 PM	6.5
M	6/3	Low	12:12 AM	0.6